

Mr. Michael Hallfarth  
Koch Materials Company  
2820 East Durbin Street  
Warsaw, IN 46580

Dear Mr. Hallfarth:

Re: Exempt Construction and Operation Status,  
085-16631-00066

The application from Koch Materials, received on October 1, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following emission units, to be located at 2820 East Durbin Street, Warsaw, Indiana, is classified as exempt from air pollution permit requirements:

One (1) boiler, fueled by natural gas only, identified as B-1, heat capacity is 6.28 mmBtu per hour. Stack height is 15 feet with a diameter of 24 inches.

One (1) hot water heater, fueled by natural gas only, identified as WH-1, heat capacity is 3.0 mmBtu per hour. Two (2) stacks each having a height of 13 feet with a diameter of 16 inches.

One (1) hot oil heater, fueled by natural gas only, identified as HO-1, heat capacity is 8.4 mmBtu per hour. Stack height is 15 feet with a diameter of 24 inches.

One (1) direct-fire immersion heater, fueled by natural gas only, identified as IM-1, heat capacity is 1.25 mmBtu per hour. Stack height is 22 feet with a diameter of 10.75 inches.

One (1) direct-fire immersion heater, fueled by natural gas only, identified as IM-2, heat capacity is 1.72 mmBtu per hour. Stack height is 33 feet with a diameter of 10.75 inches.

One (1) direct-fire immersion heater, fueled by natural gas only, identified as IM-3, heat capacity is 1.72 mmBtu per hour. Stack height is 33 feet with a diameter of 10.75 inches.

One (1) loading rack, product name is asphalt emulsion, truck rack annual throughput is 93,440.0 Mgal per hour.

One (1) loading rack, product name is polymer modified asphalt, truck rack annual throughput is 16,700.0 Mgal per hour.

Three (3) emulsion loading racks, identified as 1, 2, 3, each having a throughput of 18,000 gallons per hour.

One (1) emulsion loading rack, identified as 4, having a throughput of 8,000 gallons per hour.

Storage Tanks:

Tank 101: storing asphalt cement, with a storage capacity of 20,000 gallons and annual throughput of 877,400 gallons per year, with a diameter of 10.5 feet and height of 31.0 feet.

Tank 102: storing asphalt cement, with a storage capacity of 84,000 gallons and annual throughput of 368,5100 gallons per year, with a diameter of 29.67 feet and height of 16.0 feet.

Koch Materials Company  
Warsaw, Indiana

Page 2 of 3  
Exemption No. 085-16631-00066

Tank 103: storing asphalt cement, with a storage capacity of 84,000 gallons and annual throughput of 3,685,100 gallons per year, with a diameter of 29.67 feet and height of 16.0 feet.

Tank 104: storing asphalt cement, with a storage capacity of 168,000 gallons and annual throughput of 7,370,000 gallons per year, with a diameter of 29.89 feet and height of 32.0 feet.

Tank 105: storing asphalt cement, with a storage capacity of 500,000 gallons and annual throughput of 33,447,300 gallons per year, with a diameter of 51.0 feet and height of 32.0 feet.

Tank 106: storing asphalt cement, with a storage capacity of 500,000 gallons and annual throughput of 877,400 gallons per year, with a diameter of 51.0 feet and height of 32.0 feet.

Tank 107: storing asphalt cement, with a storage capacity of 24,681gallons and annual throughput of 1,082,800 gallons per year, with a diameter of 10.5 feet and height of 38.0 feet.

Tank 108: storing asphalt cement, with a storage capacity of 4,219,783 gallons, with a diameter of 134 feet and height of 40 feet.

Tank 120: storing asphalt cement, with a storage capacity of 25,000 gallons and annual throughput of 15,656,600 gallons per year, with a diameter of 10.5 feet and height of 38.0 feet.

Tank 140: storing asphalt cement batch, with a storage capacity of 1,500 gallons and annual throughput of 1,043,800 gallons per year, with a diameter of 7.0 feet and height of 7.5 feet.

Tank 150: storing asphalt cement batch, with a storage capacity of 24,000 gallons and annual throughput of 16,700,400 gallons per year, with a diameter of 16.0 feet and height of 16.0 feet.

Tank 201: storing asphalt emulsion, with a storage capacity of 42,000 gallons and annual throughput of 5,250,200 gallons per year, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 202: storing asphalt emulsion, with a storage capacity of 42,000 gallons and annual throughput of 5,250,200 gallons per year, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 203: storing asphalt emulsion, with a storage capacity of 42,000 gallons and annual throughput of 5,250,200 gallons per year, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 204: storing asphalt emulsion, with a storage capacity of 42,000 gallons and annual throughput of 5,250,200 gallons per year, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 205: storing asphalt emulsion, with a storage capacity of 63,000 gallons and annual throughput of 7,875,300 gallons per year, with a diameter of 21.5 feet and height of 24.0 feet.

Tank 206: storing asphalt emulsion, with a storage capacity of 63,000 gallons and annual throughput of 7,875,300 gallons per year, with a diameter of 21.5 feet and height of 24.0 feet.

Tank 207: storing asphalt emulsion, with a storage capacity of 63,000 gallons and annual throughput of 7,875,300 gallons per year, with a diameter of 21.5 feet and height of 24.0 feet.

Tank 208: storing asphalt emulsion, with a storage capacity of 63,000 gallons and annual throughput of 7,875,300 gallons per year, with a diameter of 21.5 feet and height of 24.0 feet.

Tank 209: storing asphalt emulsion, with a storage capacity of 124,000 gallons and annual

throughput of 15,500,500 gallons per year, with a diameter of 29.67 feet and height of 24.0 feet.

Tank 210: storing asphalt emulsion, with a storage capacity of 124,000 gallons and annual throughput of 15,500,500 gallons per year, with a diameter of 29.67 feet and height of 24.0 feet.

Koch Materials Company  
Warsaw, Indiana

Page 3 of 3  
Exemption No. 085-16631-00066

Tank 211: storing asphalt emulsion, with a storage capacity of 31,500 gallons and annual throughput of 3,937,700 gallons per year, with a diameter of 15.39 feet and height of 24.0 feet.

Tank 212: storing asphalt emulsion, with a storage capacity of 48,000 gallons and annual throughput of 6,000,200 gallons per year, with a diameter of 16.0 feet and height of 32.0 feet.

Tank 400: storing fuel oil, with a storage capacity of 20,135 gallons and annual throughput of 14,016,000 gallons per year, with a diameter of 10.5 feet and height of 31.0 feet.

Tank 401: storing LD-95, with a storage capacity of 10,410 gallons, with a diameter of 10.5 feet and height of 16.0 feet.

Tank 410: storing asphalt emulsion, with a storage capacity of 20,135 gallons, with a diameter of 10.5 feet and height of 16.0 feet.

The following conditions shall be applicable:

- (1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:
  - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
- (2) Pursuant to the New Source Performance Standard 326 IAC 12, (40 CFR 60.110b, Subpart Kb), storage tank # 400 is subject to the following: the owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

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cc: File - Kosciusko County  
Kosciusko County Health Department  
Air Compliance - Doyle Houser

Northern Regional Office  
Permit Tracking  
Technical Support and Modeling - Michele Boner  
Compliance Data Section - Karen Nowak

# **Indiana Department of Environmental Management Office of Air Quality**

## **Technical Support Document (TSD) for an Exemption**

### **Source Background and Description**

**Source Name:** Koch Materials Company  
**Source Location:** 2820 E. Durbin Street, Warsaw, IN 46580  
**County:** Kosciusko  
**SIC Code:** 2952  
**Operation Permit No.:** 085-16631-00066  
**Permit Reviewer:** Madhurima D. Moulik

The Office of Air Quality (OAQ) has reviewed an application from Koch Materials Company relating to the operation of the following emission units:

One (1) boiler, fueled by natural gas only, identified as B-1, heat capacity is 6.28 mmBtu per hour. Stack height is 15 feet with a diameter of 24 inches.

One (1) hot water heater, fueled by natural gas only, identified as WH-1, heat capacity is 3.0 mmBtu per hour. Two (2) stacks each having a height of 13 feet with a diameter of 16 inches.

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### **Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Registration No. 085-6192-00066, Issued on December 20, 2001.

The source's potential to emit of all criteria pollutants, including the emission unit modifications and additions, are below the exemption levels as listed in 326 IAC 2-1.1-3(d). Therefore, an Exemption will be issued to the source.

### **Recommendation**

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on October 15, 2002.

### **Emission Calculations**

See Appendix A of this document for detailed emissions calculations from combustion sources at the facility. The tank emissions are based on the emission calculations submitted by the source.

### **Potential To Emit**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	0.7
PM-10	0.7
SO <sub>2</sub>	0.1
VOC	9.5
CO	8.2
NO <sub>x</sub>	9.8

HAP's	Potential To Emit (tons/year)
Single HAP	<10
TOTAL	<25

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3.

### County Attainment Status

The source is located in Kosciusko County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Kosciusko County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Kosciusko County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

### Part 70 Permit Determination

#### 326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from the new emission units, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,  
 (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and  
 (c) any combination of HAPs is less than 25 tons/year.

### Federal Rule Applicability



- (a) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities), because this source is not a hot mix asphalt plant.
- (b) The storage tanks at the source are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110, Subpart K), because the tanks with capacities greater than 40,000 gallons do not store petroleum liquids, and those that store fuel oil have storage capacities of less than 40,000 gallons.
- (c) The storage tank identified as Tank # 400, storing fuel oil, with a storage capacity of 20,135 gallons (greater than 40 cubic meter), is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb. With a maximum storage capacity of less than 151 cubic meter, the following shall apply, pursuant to 326 IAC 60.116b: The owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

#### **State Rule Applicability - Entire Source**

##### **326 IAC 2-6 (Emission Reporting)**

This source is located in Kosciusko County and the potential to emit of all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

##### **326 IAC 5-1 (Visible Emissions Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### **State Rule Applicability - Individual Facilities**

##### **326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

This source has the potential to emit of less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

##### **326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)**

The storage tanks at this source that are used to store fuel oil have storage capacities of less than 39,000 gallons. Therefore, none of the tanks at this source are subject to this rule.

#### **Conclusion**

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 085-16631-00066.



**Appendix A: Emissions Calculations****Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****Company Name: Koch Materials Company****Address City IN Zip: 2820 E. Durbin Street****CP: 085-6192****Plt ID: 085-00066****Reviewer: Madhurima D. Moulik****Date: October 24, 2002**Heat Input Capacity  
MMBtu/hrPotential Throughput  
MMCF/yr

22.4

196.0

Pollutant						
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	SO2 0.6	NOx 100.0 **see below	VOC 5.5	CO 84.0
Potential Emission in tons/yr	0.2	0.7	0.1	9.8	0.5	8.2

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

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**Appendix A: Emissions Calculations****Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****HAPs Emissions****Company Name: Koch Materials Company****Address City IN Zip: 2820 E. Durbin Street****CP: 085-6192****Plt ID: 085-00066****Reviewer: Madhurima D. Moulik****Date: October 24, 2002****HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.058E-04	1.176E-04	7.349E-03	1.764E-01	3.331E-04

**HAPs - Metals**

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	4.899E-05	1.078E-04	1.372E-04	3.723E-05	2.058E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.